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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,578

07/31/2006

Julie Baker

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EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

MAIL DATE

DELIVERY MODE

12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,578	Applicant(s) BAKER ET AL.	
	Examiner LAURA E. MARTIN	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haruta et al. (JP 58-136482 A) in view of Iwasa et al. (US 2002/0012786 A1).

Haruta et al. disclose the following claim limitations:

As per claim 1: an ink jet receiver comprising a voided polymer ink-receiving layer (figure 3, element 1); printing an image onto an ink jet receiver using a printer to generate a print and applying pressure and/or heat to the print before or after the step of coating and thereby improving the surface properties (constitution), the heat creating a reaction that causes the foaming in the resin layer, wherein the voided polymer ink-receiving layer is a foamed hydrophilic polymer ink-receiving layer.

Haruta et al. do not specifically disclose loading the ink jet printer with an ink jet receiver; however, It would have been obvious to one of ordinary skill in the art at the time of the invention that if an image was formed onto a receiver by means of an ink jet printer, the receiver must be loaded into the printer.

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As per claim 2: the application of pressure and/or heat to the print reduces the roughness and increases the gloss of the surface of the print (constitution – melting reduces roughness by allowing the surface to disperse evenly).

As per claim 9: the application of pressure and/or heat to the print is carried out using a fusing device. It would have been obvious to one of ordinary skill in the art at the time of the invention that if the top layer was melted, it would be fused together in some way. The device that causes this melting would be the fusing device.

As per claim 10: an ink jet print (purpose).

Haruta et al. do not disclose the following claim limitations:

As per claim 1: the voided polymer ink-receiving layer is a foamed hydrophilic polymer ink-receiving layer obtainable by coating a support with a solution containing a hydrophilic polymer and a blowing agent, and interacting with the solution to cause said blowing agent to generate gas bubbles within said solution causing the foaming of said hydrophilic polymer.

As per claim 5: the polymer is selected from PVA, PEO, PVP, and gelatin.

Iwasa et al. disclose the following claim limitations:

As per claim 1: the voided polymer ink-receiving layer is a foamed hydrophilic polymer [0012] (the claim has no limitation as to the amount of hydrophilic polymer, nor does it claim the absence of a hydrophobic polymer within it) ink-receiving layer obtainable by coating a support with a solution containing a hydrophilic polymer and a blowing agent, and interacting with the solution to cause said blowing agent to generate

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gas bubbles within said solution causing the foaming of said hydrophilic polymer [0053] – [0054].

As per claim 5: the polymer is selected from PVA, PEO, PVP, and gelatin [0018].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Haruta et al. with the disclosure of Iwasa et al. in order to provide higher quality images through faster ink drying.

As per claim 8: Haruta et al. as modified discloses the claimed invention except for the weight of a blowing agent is about 10% to about 60%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the amount of the blowing agent in the ink composition, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

Applicant's arguments filed 8/27/09 have been fully considered but they are not persuasive.

Applicant argues that the references cited do not teach the use of a foamed hydrophilic polymer ink receiving layer obtained by coating a support with a solution comprising a hydrophilic polymer and a blowing agent, and either before or after the

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step of coating, interacting with the solution to cause the blowing agent to generate gas bubbles within the solution causing the foaming of the hydrophilic polymer. The examiner disagrees

Hatasa et al. disclose the coating of a porous resin layer onto an ink recording sheet. It would have been obvious to one having ordinary skill in the art at the time of the invention that this resin layer would have to be coated onto the sheet somehow. The applicant does not limit "coating," such that it could be any form of placing one layer on top of another. Hatasa et al. also disclose interacting with the solution to cause the blowing agent to generate gas bubbles within the solution causing the foaming of the resin polymer (the light creates the pores; obviously the blowing agent, when exposed to light and heat, would react to cause the porous film.

Iwasa et al. disclose a solution comprising a hydrophilic polymer and a blowing agent. The porous resin film is obviously mixed with the foaming agent that is taught in [0054], as a foaming agent would need to be mixed with the substrate in order for it to cause the pores to form. Iwasa et al. disclose a hydrophilic polymer in [0012]. The claim does not specify the amount or need for the resin to be only comprised of a hydrophilic polymer, thus this satisfies the claim language. Iwasa et al. also discloses interacting with the solution to cause the blowing agent to generate gas bubbles within the solution causing the foaming of the hydrophilic polymer. In [0054], Iwasa et al. disclose that a foaming agent can be used to create the pores; while stretching is the preferred method, it still can occur through a foaming agent. While it is less preferred, it is still taught as a possible method of creating a porous resin, and as such, overcomes

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the claim language when modifying Hatasa et al. The resin film would have to be coated onto the substrate in some form as discussed above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA E. MARTIN whose telephone number is (571)272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. E. M./
Examiner, Art Unit 2853

/Stephen D Meier/
Supervisory Patent Examiner, Art Unit 2853